REMARKS

The foregoing amendments and the following remarks are submitted in response to the communication dated February 26, 2003

Status of the Claims

Claims 1-4, 9-14, and 19-21 are pending in the application. Claims 5-8 and 15-17, which are withdrawn from consideration, have been cancelled. Claims 19 and 22 have been amended in order to more particularly point out and distinctly claim that which Applicants regard as the invention. Support for the amended claims can be found generally through Applicants' Specification.

The Double Patenting Rejection

The Examiner has rejected Claims 19 and 22 under the judicially created doctrine of obviousness type double patenting as being unpatentable over Claim 1 of U.S. Patent No. 5,591,629 ("the '629 Patent"). The Examiner asserts that, although the conflicting claims are not identical, they are not patentably distinct from each other in that the monoclonal antibody species set forth therein is the parent molecule of the antigen binding fragment of SCH 79.08 claimed and as such the antigen binding fragment of the monoclonal antibody SCH 79.08 is an obvious variant. Moreover, the Examiner argues the SCH 79.08 antibody itself anticipates the claim in regard to the generic "monoclonal antibody capable of inducing remyelination". Applicants submit that Claim 22, directed to pharmaceutical compositions comprising antigen binding fragment of SCH 79.08, is not anticipated per se by Claim 1 of the '629 Patent. Applicants further disagree that Claim 1 of the '629 Patent anticipates Claim 19, particularly as now presented and directed to pharmaceutical composition comprising synthetic autoantibody capable of inducing remyelination of central nervous axons. Applicants point out that Claim 1 of the '629 Patent is directed specifically to "a monoclonal antibody capable of stimulating remyelination of central nervous system axons, said monoclonal antibody produced by the hybridoma having the ATCC accession No. CRL 11627", which deposited and referenced

monoclonal antibody corrseponds to antibody SCH 94.03 and not to antibody SCH 79.08. In any event, the SCH 79.08 monoclonal antibody does not anticipate or make obvious per se antigen binding fragments thereof nor does it anticipate any synthetic autoantibodies capable of inducing remyelination of central nervous axons. Applicants request that the double patenting rejection be withdrawn.

The Specification Fully Enables the Claimed Invention

The Examiner has rejected claims 1-4, 9-14 and 19 under 35 U.S.C. 112, first paragraph, because the Examiner asserts that the Specification, while being enabling for methods of stimulating remyelination or treating demyelinating disease in a mammal by administering an effective amount of monoclonal antibodies that induce remyelination of central nervous system axons, the specific monoclonal autoantibodies: A2B5, SCH79.08 and synthetic monoclonal autoantibodies, monoclonal autoantibodies 01, 04, and HNK-1 are not enabled. The Examiner maintains that the specific antibody clones of antibodies 01, 04 and HNK-1 are not publicly available.

With regard to HNK-1, the Examiner notes that the Exhibit which was attached to Applicant's reply mailed November 27, 2002, became detached and was not available for the Examiner's review. Applicants attach and provide a copy of said Exhibit, demonstrating the public availability of antibody HNK-1, it being available for sale by the ATCC. Applicants submit that the HNK-1 antibody is publicly available and is, in fact, offered for sale by several sources.

Applicants again argue and assert that the O1 and O4 antibodies are publicly available and for sale. Applicants once again point to the clear evidence presented in prior responses. Specifically, Applicants have demonstrated that the O1 and O4 antibodies have been offered for sale by Roche Molecular Biochemicals, USA and are presently being distributed by Chemicon International. The sales material and technical data sheets of Chemicon clearly refer back to the Roche distributed antibodies and further clearly and solely reference the isolation of these O1 and O4 antibodies by the laboratory of Dr. Melitta Schachner, as also referenced by Applicants in the Specification. Applicants have further provided a declaration of Dr. Moses

Rodriguez stating and establishing that the O1 and O4 antibodies offered for sale by Roche Molecular Biochemicals USA (now distributed by Chemicon International as noted) are the same as the O1 and O4 antibodies provided and claimed in the instant Application.

Applicants believe that there is a misunderstanding regarding the O1 and O4 antibody nomenclature and provide clarification for the Examiner. The O1 and O4 monoclonal antibodies were generated in the laboratory of Dr. Melitta Schachner and their characteristics first reported in 1981 ("Monoclonal Antibodies (O1 to O4) to Oligodendrocyte Cell Surfaces: An Immunocytological Study in the Central Nervous System", Sommer and Schachner (1981) Developmental Biology 83,311-327), as referenced in Applicants' Specification. The O1 and O4 oligodendrocyte antigens were named and are characterized per se as antigens which are bound or recognized by these monoclonal O1 and O4 antibodies of Schachner. The Kettenmen reference cited by the Examiner at page 4 of this Action is a 1985 publication from the Schachner laboratory detailing studies with the Schachner monoclonal antibodies O1 through O11, all so named as recognizing an oligodendrocyte surface antigen. Similarly, the Bastmeyer reference cited by the Examiner at page 4 of this Action is a 1989 publication reporting studies with the Schachner O1 antibody. Recently, Applicants have further been informed that R&D Systems is also offering the Schachner O1 and O4 antibodies for commercial sale. This is presented as evidence in the attached Exhibit, which Applicants assert unequivocally refers to "Clone O1" and "Clone O4". The undersigned has further confirmed by telephone conversation with Dr. Melitta Schachner that these R&D Systems antibodies correspond to the Clones O1 and O4, having received the clones directly from her laboratory and institution. The Applicants submit that the O1 and O4 antibodies as claimed are publicly available and are, in fact, offered for sale by several commercial sources. Applicants appeal to the Examiner to withdraw this rejection in view of the clear evidence provided.

In view of the foregoing remarks, Applicants submit that the Examiner's rejection under 35 U.S.C. 112, first paragraph, may properly be withdrawn.

The 35 U.S.C. 102 Rejections

The Examiner has rejected Claim 19 under 35 U.S.C. 102(b) as anticipated by Abo et al (J. Immunol., 127:1024-1029, 1981) or American Type Culture Collection Catalog, 1992, page 435, which the Examiner asserts teach the monoclonal antibody HNK-1 and anticipate the product claim. Applicants respectfully disagree and submit that these citations and the monoclonal antibody HNK-1 do not anticipate Claim 19, particularly as now presented. These references teach a particular and specific monoclonal antibody HNK-1 hybridoma clone and do not factually anticipate or teach the pharmaceutical composition of Claim 19.

The 35 U.S.C. 112, Second Paragraph Rejection

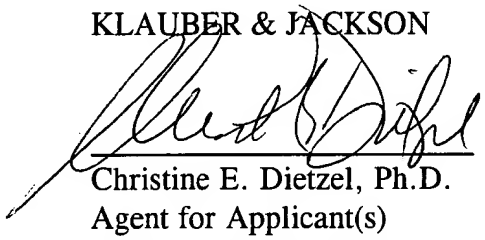
The Examiner has rejected Claim 22 under 35 U.S.C. 112, second paragraph, as indefinite in its recitation of "selected from the group". Applicants have above amended Claim 22 to correct this error and request that the rejection be withdrawn.

CONCLUSION

Applicants respectfully request entry of the foregoing amendments and remarks in the file history of the instant Application. The Claims as amended are believed to be in condition for allowance, and reconsideration and withdrawal of all of the outstanding rejections is therefore believed in order. Early and favorable action on the claims is earnestly solicited.

Respectfully submitted,

KLAUBER & JACKSON



Christine E. Dietzel, Ph.D.
Agent for Applicant(s)
Registration No. 37,309

KLAUBER & JACKSON
411 Hackensack Avenue
Hackensack NJ 07601
Tel: (201) 487-5800

Complete Listing of Claims in Application U.S.S.N. 08/692,084

Claim 1 (previously amended) A method of stimulating remyelination of central nervous system axons in a mammal which comprises administering to said mammal an effective amount of a monoclonal autoantibody selected from the group consisting of SCH 79.08, 01, 04, A2B5, HNK-1, antigen binding fragments thereof, monoclonal autoantibody capable of inducing remyelination of central nervous system axons and synthetic autoantibody capable of inducing remyelination of central nervous system axons.

Claim 2 (previously amended) The method of Claim 1 or 20 wherein the method of administration is intravenous administration.

Claim 3 (previously amended) The method of Claim 1 or 20 wherein the method of administration is intraperitoneal administration.

Claim 4 (previously amended) The method of Claim 1 or 20 wherein said amount of monoclonal antibody administered is between from about 0.5 mg/kg to about 400 mg/kg.

Claims 5-8 (Cancelled)

Claim 9 (previously amended) A method of treating a demyelinating disease of the central nervous system in a mammal in need of such therapy which comprises administering to said mammal an effective amount of a monoclonal autoantibody selected from the group consisting of SCH 79.08, 01, 04, A2B5 and HNK-1, antigen binding fragments thereof, monoclonal autoantibody capable of inducing remyelination of central nervous system axons and synthetic autoantibody capable of inducing remyelination of central nervous system axons.

Claim 10 (previously amended) The method of Claim 9 or 21 wherein said mammal is a human being having multiple sclerosis, or a human or domestic animal with a viral

demyelinating disease, or a post-neural disease of the central nervous system.

Claim 11 (previously amended) The method of Claim 9 or 21 wherein the method of administration is intravenous administration.

Claim 12 (previously amended) The method of Claim 9 or 21 wherein the method of administration is intraperitoneal administration.

Claim 13 (previously amended) The method of Claim 9 or 21 wherein said amount of monoclonal antibody administered is between from about 0.5 mg/kg to about 400 mg/kg.

Claim 14 (previously amended) The method of Claim 9 or 21 wherein said mammal is a mouse infected with Strain DA of Theiler's murine encephalomyelitis virus.

Claims 15-18 (Cancelled)

Claim 19 (previously amended) A pharmaceutical composition comprising as the active agent, a monoclonal autoantibody comprising a ~~selected from the group consisting of monoclonal autoantibody capable of inducing remyelination of central nervous system axons and~~ synthetic autoantibody capable of inducing remyelination of central nervous system axons.

Claim 20 (previously amended) A method of stimulating remyelination of central nervous system axons in a mammal which comprises administering to said mammal an effective amount of a monoclonal autoantibody selected from the group consisting of SCH 94.03 and antigen binding fragments thereof.

Claim 21 (previously amended) A method of treating a demyelinating disease of the central nervous system in a mammal in need of such therapy which comprises administering to said mammal an effective amount of a monoclonal autoantibody selected from the group consisting

of SCH 94.03 and antigen binding fragments thereof.

Claim 22 (currently amended) A pharmaceutical composition comprising as the active agent, a monoclonal antibody comprising ~~selected from the group consisting of~~ an antigen binding fragment of SCH79.08.